No 5

# The Summer and Autumnal Diseases of the Western Country; —

An Inaugural Dissertation,

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In endeavouring to select a subject for an Inaugural Essay, I find none that is more adapted to the purpose, than a description of the Summer and Autumnal diseases of the Western States.

The almost insulated condition, the rapid increase of Population, and political importance of that Country, are of themselves sufficient to render interesting, an investigation of the characteristic features, and the peculiarities of the diseases which extensively prevail through a great region of Country, to ascertain their causes, and apply proper remedies will be a valuable acquisition to our professional knowledge, and of the greatest importance to the cause of Humanity.

During a residence of several years in the State of Ohio, I have had an opportunity

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of making many observations on the Pathology of the prevailing Diseases, and have had some practical experience in the treatment and cure of them; although much more time and a greater opportunity, would be necessary, to give a complete view of the subject; My object in this paper is merely to sketch the nature, treatment and causes of the diseases which annually prevail in a district of Country hitherto but little noticed by Medical Authors.

Before entering into a further detail of the subject, a few remarks on the nature of the Climate, the habits of the people, and their manner of living, may be of service.

During the Winter months, the Winds are from the South West, passing from the Rocky Mountains, they sweep over an extensive portion of high flat, or

table land, sometimes varying to the North producing a cold and clear Atmosphere, which gives a peculiar degree of health activity and vigour to the inhabitants.

In the month of March the wind is very variable, with frequent rain and slight snow storms, and the temperature of the Atmosphere unequal. The diseases consequently are of an inflammatory nature.

In April and May the wind is more regular, and mostly from the South West, the temperature moderate and gradually increasing; During these months the diseases assume more of Bilious tendency, producing a form of fever different from any that I have seen described in the Books. It commences its attack, with an heavy Chill without any premonitory symptoms, and is soon followed by nausea and vomiting

great pain in the Head, flushed countenance with much anxiety. The pulse full strong and not frequent, The skin dry, and the tongue covered with a yellowish brown ~~coat~~ coat, and the thirst not very great; The Bowels either very costive or very free, a slight delirium generally prevails, and the patient is sometimes carried off with all the symptoms of apoplexy; But this is seldom the case when active remedies have been used. It is different from Synocha in its mode of attack, and termination, for we very seldom find it terminating in the Typhus. — There is much greater Biliary derangement than in the Synocha and the System is not so generally affected. It has no regular remissions, and gradually leaves the patient in six or eight days It is generally cured by the free use of the lancet and active purgatives.

In the months of June and July, the winds vary from South West to south East, the latter followed by continued rains and sudden showers, producing great floods in the small Rivers and creeks. The rise of the larger Rivers depend upon the melting of the snow, collected on the Mountains, which generally is in March or April, over flowing their banks extensively, and thus becoming a fruitful source of disease. The temperature of the atmosphere much increased and the evenings frequently warm; the vegetation luxuriant and rapid in its growth. The Inflammatory nature of the diseases lessening, and the disorders of the bowels increasing. ~~Cholera~~ Cholera Infantum becomes Epidemic in nearly all parts of the country. In the latter part of July Cholera Morbus and Dysentery make their appearance

In August and September the vegetation having reached its acme, now fades rapidly, as is scorched by the intense heat of the Sun, The temperature of the atmosphere is at its height in July and August, although the evenings of the latter are frequently cool and refreshing. The dews are very heavy and the fogs frequent in lowgrounds, and in the vicinity of rivers. Rain seldom appears excepting in sudden showers attended with much thunder and Lightning; The Springs either become dry or evaporated before they pass far from their sources, the Creeks and small streams partake of the nature of ponds, and the luxuriant crop of vegetables is now undergoing a state of rapid decomposition, filling the atmosphere with a variety of exhalations. During this time the winds prevail from the Southwest

and South, coming from the Gulf of Mexico, passing up the great valley of the Mississippi, sweeping over a large portion of alluvial land, and extensive prairies, loaded with the effluvia of decaying vegetables; impregnating the atmosphere with their noxious principles. then passing over an extensive flat, and uncultivated forest, and finally arrives at the fertile improvements of the Inhabitants of the Western States.

In the early part of August Intermittent fever and Dysentery generally prevail, the fever gradually changing to the remittent, and continued forms; and in September frequently assumes the Typhoid type, which in some places exhibits a degree of Malignancy equal to that which has appeared in any of our Atlantic Cities.

The temperature in october is more mild, a gentle breeze from the West, frequently renders the afternoons pleasant and the evenings cool, but these are alternate with warm nights, and sudden showers of rain. About the Middle of this month the temperature is reduced to the freezing point which puts an effectual stop to the Autumnal diseases, or changes them into an inflammatory character.

The month of November is characterized by that peculiar kind of weather called Indian summer. The atmosphere so thick, Hazy, or smokey, that the Sun is generally obscured, while the temperature is mild and agreable, the Autumnal diseases entirely disappear, the wan and sallow countenance is exchanged for the full and rounded features, and finally December bestows on the

weary Physician, and the convalescent patient, Health, Vigour and Happiness.

This extensive country is inhabited by people from all parts of the United States, and many parts of Europe. Their diseases, in all probability, are in some measure influenced by the change of Climate to which they are subjected on their arrival. They are generally of a large and robust appearance, their constitutions strong and vigorous, their exercises of an active nature and consequently their Muscular system strongly marked. In country places and small Villages they are much exposed, by sleeping in open Houses and on ground floors. In the larger Towns they have all the necessary comforts of life, without many of the luxuries of large Cities. There is consequently less variety of disease but of a more active nature.

The manner of living among the Agriculturists is generally simple, plain and good. In the large Towns, they have every thing that a fertile country, luxuriant in vegetation, and undergoing a state of rapid improvement, can produce.

With extreme regret I am obliged to acknowledge, that spirituous liquors are the common articles of drink; they are among the staple commodities, and are used in great abundance. Their effects on the Human system are too well known to require an illustration. They undoubtedly act as a predisposing cause to a large number of the cases of Bilious fever in the Western States.

In the Months of March, April and May, the diseases require but little variety of treatment different from that used in Inflammatory complaints, in

other parts of the country, excepting that the depleting remedies are carried to a greater extent. The Brain and the Lungs are the organs most generally affected at this season of the year, In May the biliary organs are much deranged in their functions, and the power of the stomach much impaired, Purgative medicines are used largely, and those in which calomel is an ingredient are the most valuable, As soon as the inflammatory stage of the disease ~~are~~ is removed the Tonic medicines especially the Peruvian Bark is resorted to with good effect.

Cholera Infantum seems to have few peculiarities, perhaps the only variation from the ordinary character, is the greater degree of malignancy. The treatment used is very various, and in many instances unsuccessful. Some Physicians of ~~extensive~~ extensive

practice depend entirely upon [redacted] Astrigents, Others connect there with the warm bath, which determins the fluids to the surface of the Body, and the bowels are thereby relieved. Many purge freely under the impression that there is some morbific matter in the intestines which must be removed, while others use mild laxatives, and Diaphoretics, such as, Calomel Opium and Ipecacuan, three grains of the former, and one grain of each of the latter powdered and mixed, divided into six powders one given every two hours. Perhaps if this method was alternated with the first, and assisted by the warm bath something might be gained. Cholera Morbus has nearly the same symptoms; runs through a similar course and requires a similarity of treatment with that in other parts of the United States.

Dysentery is characterized by a discharge of white flakey mucus mixed with Blood, great costiveness, and inflammatory action, much determination to the kidneys, liver and spleen the function of the liver much deranged, pouring out bile in large quantities and of a vitiated quality, The general opinion is, that the great constipation is owing to the acridity of the bile rather than a collection of hardened faces, there being seldom found in the discharges. Blood letting in the early stages frequently produces happy effects, indeed it can seldom be dispensed with. The second indication is, to overcome the constipation of the Bowels, which is often attended with much difficulty, large doses of calomel sometimes combined with opium is the only medicine ~~that~~ on which much dependence can be placed

The third indication is, to produce a determination to the surface of the Body; the most effectual Medicine for this purpose is a combination of Calomel Opium and Ipecacuan, in small and frequently repeated doses. After the first evacuation of the bowels there seem but little difficulty in keeping up the action by mild purgatives, castor oil being one well adapted to the purpose; Blisters to the Abdomen frequently prove highly serviceable.

The bilious Autumnal fevers are the most common, and the most important of all the diseases of the West; they assume all the various states, from the most mild Intermittent to the most malignant Typhoid, and they all seem to derive their influence from a vitiated state of the Atmosphere.

Little need be said of the Intermittent fever, as it bears nearly the same character in all parts of the United States. It annually visits nearly the whole of the Country West of the Alleganey Mountains. There is in this disease a great tendency to viseral obstruction, Purgative medicines are used largely, and the Peruvian Bark administered freely. The Intermittent frequently passes into a remittent, continued, and typhoid type, and there again into the Intermittent.

The symptoms of the bilious Remittent fever frequently varies according to the humidity or the dryness of the Atmosphere, assuming an inflammatory nature after frequent rains, but during dry seasons ~~they~~ ~~have~~ it has a strong tendency to fall into the typhoid state. It is usually attended with a full, slow ~~and~~ strong

pulse, great thirst and flushed counte
nance, and great determination to some in
ternal ~~organs~~ organ, The Brain, the liver
the spleen ~~and~~ the stomach ~~are~~ the organs most
affected. It seems to be the nature of the dis
ease that some one organ only shall be af
fected at a time, The Brain is most general
ly affected in the early part of the Summer,
the liver and spleen in the autumn;
and the lungs in the Winter and spring
Sometimes a tendency to congestion contin
ues in one organ throughout the warm season.
There is generally great costiveness, and a
general torpor throughout the alimentary
canal. The stomach is generally very irrita
ble, until the acrid contents shall be vac
uated by an Emetic, when a large quanti
ty of bile and acrid mucus is discharged
after which it will generally recieve the
other medicines without offence.

But such is the torpor of the bowels that very large doses of the most active medicines are frequently administered before they take any effect. This fever is attended with the usual symptoms which are observed in other parts of the country, and therefore unnecessary to repeat them here. The paroxysms pass through their usual stages, remit and return in the ordinary manner but the whole course frequently is much shorter than in some other parts of the United States. It frequently terminates favourably or otherwise in five or six days it sometimes terminates in Phrenitis or apoplexy on the fifth or sixth day, but generally continues until the fourteenth or fourteenth day from the first paroxysm. The indications in this disease are very plain, but the treatment is very various. Some practitioners use the lancet very

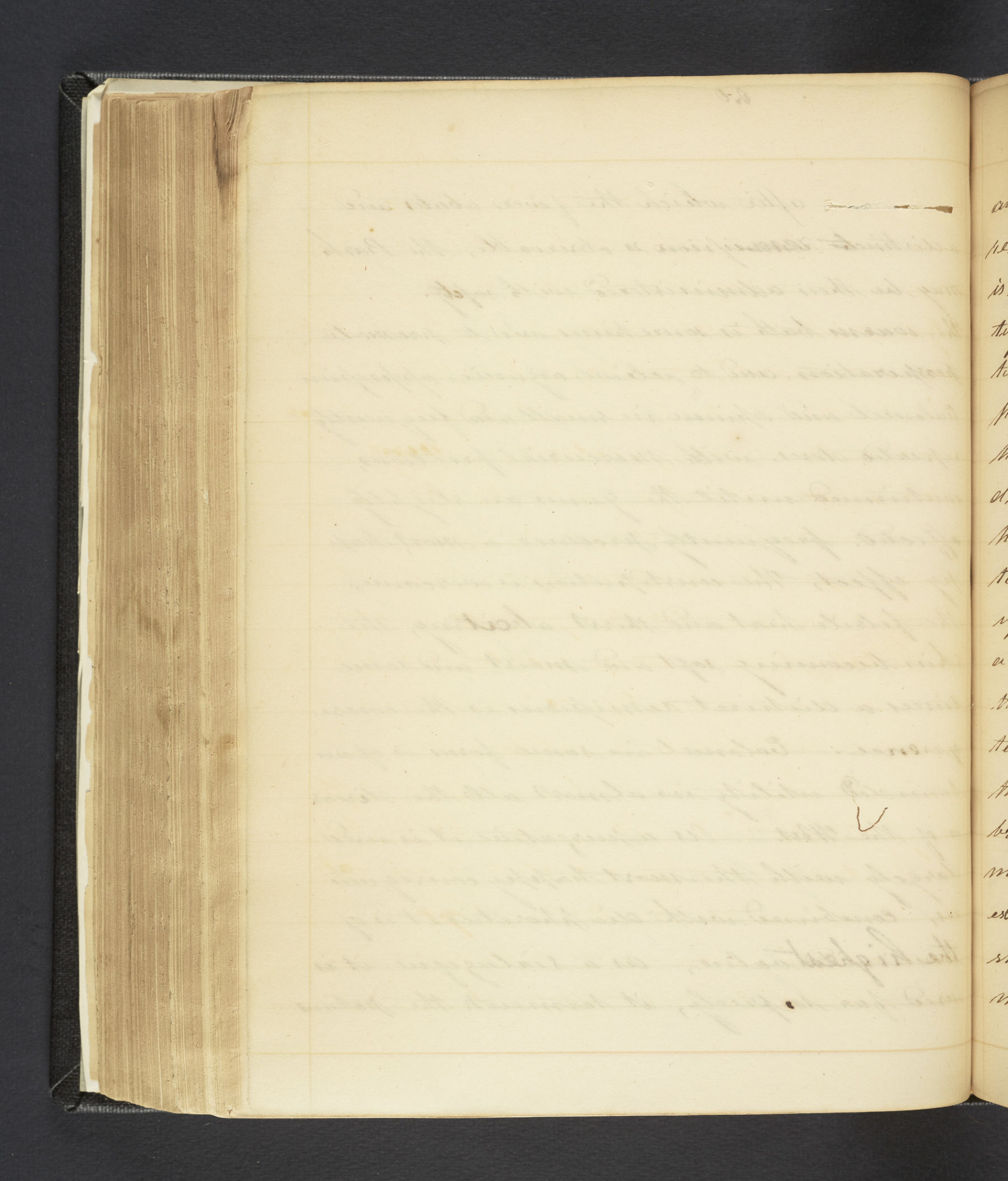
freely in the first stages, following it by Emetics and Cathartics, while others depend entirely on these medicines until a distinct remission is obtained, when the Peruvian Bark is administered with success;

Some use Tartrate of Antimony so as to produce full vomiting, while others use it only in small and frequently repeated doses with good effect. And there are not a few who always associate the name of bilious fever, with a profuse salivation. Mercury in this disease used as a cathartic is an invaluable medicine; and in some instances the system requires to be slightly affected; but a profuse discharge of saliva in general is injurious, and never expedites the cure.

A combination of these various principles I have seen happily adopted. The first indication is, to lessen arterial action.

and relieve internal congestion, nothing will do this more effectually than bloodletting. The second indication is to evacuate the Bowels. There is generally such an accumulation of bile as to render the stomach so irritable, that scarcely any medicine will be retained on it a sufficient length of time to make an impression on the system. Emetics are therefore strongly indicated. They often do much more than merely evacuate the stomach, they make a powerful impression on the system which prepares it for the reception of other medicines. The most active cathartics are now resorted to, a combination of Calomel & Jalap and Gamboge mostly has an admirable effect. but it sometimes requires them to be repeated daily, until the alimentary canal is entirely evacuated.

after which the fever abates and a distinct remission is observable, the Bark may be then administered with safety.
The warm bath is sometimes used to promote perspiration, and to relieve organic oppression Calomel and opium in small and frequently repeated doses, with mercurial frictions, continued until the Gums are slightly affected, frequently produce a most happy effect, The constipation is overcome, the febrile heat and thirst abating, the skin becoming soft and moist, and sometimes a distinct remission is the consequence. Calomel in some form is of unbounded utility in almost all the diseases of the West. As a purgative it is used largely with the most happy consequences, combined with diaphoretics it is of the highest value, as a sialogogue it is used far too freely, it torments the patient



and seldom is necessary to the cure of Bilious remittent fever. Tartrate of Antimony is used largely, and requires double the quantity usually recommended in the Books to produce full vomiting. During the paroxysm the Antimonial preparations have a powerful effect in relieving the distress and anxiety. After the bowels have been once aroused from their torpidity, the action is easily kept up by the milder purgatives, until a distinct remission is obtained, when the Bark and other tonics are administered with propriety. A few days of this kind of treatment will generally bring the patient into a regular intermittent or a confirmed state of convalescence. — The prostrate or Typhoid state of this fever seems to require a mode of treatment different from any

that I have met with in the Books but I do not know that it is peculiar to the Western country. This fever is frequently attended with a depressed state of the system, the pulse small, hard and irregular or intermittent, as if labouring to relieve itself of a load. The extremities shriveled and cold; the thirst great and the skin dry and hot, and many symptoms of internal congestions. The excitement generally confined to the Head, Lungs or Liver. The stomach and intestines much disordered. The patient is either wild frantic or comatose, a confirmed stupor comes on and death ends the scene. Where there is great determination to the lungs, Bloodletting is imperiously demanded, Blisters over the Chest, and on the extremities are generally applied; and the Bowels are evacuated by a glyster. When the Brain has been affected

opening the Jugular vein, and the application of cold water to the head has been found highly beneficial. Blisters applied to the extremities. The Body sponged with cold water and the bowels evacuated by an active purge. These will generally relieve the most urgent symptoms when the Bark and the other tonics are administered freely. If the liver be the organ affected, a Blister over the part and on the extremities is applied. and Calomel in large and repeated doses is found generally to relieve the oppression. While the evacuating remedies are in use the diffusible stimulants are given to keep up an equable excitement and allay irritation. The stimulating tonics, such as Wine Brandy or any of the preparations of Alcohol, and diaphoretics are use as soon as the state of the system will admit.

This state of fever is sometimes induced by too free use of evacuating remedies, or too long delay of the Tonics; In such cases the usual practice is, to use the most powerful stimulants and tonics, and at the same time keep the bowels open by mild purgatives; apply blisters to the extremities, and cold applications to the Head.

It now only remains for me to speak of the Malignant grade of fever, that occasionally visits the larger Towns, which are situated on the borders of rivers and adjacent to some Marsh, or extensive low land, which is frequently overflown, by the rise of the Rivers. They are of course exposed to the generall influence of the atmosphere; an increase of humidity, and to Marsh Miasmata. During the last Summer, an Epidemic prevaild at Louisville Kentucky where it was particularly extensive and fatal.

For a detailed account of which, I am indebted to Dr Harrison a resident Physician of that place. Louisville is situated immediately on the bank of the river, a small creek just in just below the town, about the mouth of which much vegetable matter of ters collects. There is a portion of flat land filled with ponds of water in the early part of Summer, extending several miles. The town continuing along its margin for a considerable distance.

"The fever" says Dr Harrison "commenced in the last of June, but did not excite much alarm until the last of July, when it became very general, prevailing in almost every family, and extending its noxious influence twenty miles through the country, gradually losing its characteristic features and falling into the common bilious fever.

The system in most cases was in a state of great oppression, Muscular strength suddenly and excessively reduced. The pulse sometimes throbbing and irregular, at other small and hard: and frequently the vibrating or depressed pulse was observed. The liver and spleen engorged or distended with blood the former secreting very little bile and that of an altered quality. There was usually great costiveness, and the stomach very irritable, few medicines could be retained on it a sufficient length of time to produce any good effect. The fever seldom remitted until the fifth or sixth day, and sometimes proved fatal on the fourth day. — A vomiting of dark flaky matter occasionally took place after which none recovered the skin was seldom more yellow than in ordinary cases of bilious remittent fever.

It did not appear in any case to be contagious, but to depend on a peculiar state of the Atmosphere, which became less sensible in proportion to the distance from the Focus. From the dissections it was found, that the liver and Spleen were much distended with blood, and very easily lacerated. The internal coat of the Stomach in some instances was entirely destroyed, and the intestinal canal much inflamed; in such cases a vomiting of dark flaky matter had preceded Death. The lungs and the Brain generally natural. The latter sometimes in an inflamed state, and the former much filled with mucus. From the result of these examinations as well as the symptoms, we must conclude that the Stomach was the principal seat of the disease. The treatment of this disease was at first very various, but

after a time a regular practice was established and generally proved successful.
In the first stage of the fever, but not after the third day, Bloodletting was found to produce an admirable effect. Emetics were generally injurious and sometimes fatal. Calomel seemed the only medicine that would lie on the stomach, or produce any good effect. indeed it was the sovereign remedy. It was given largely when the stomach would bear it, but the irritability of that organ was frequently so great, that small doses combined with opium only could be used. These were repeated every hour until a slight affection of the gums was perceptable; At this time the bowels would generally give way. the irritability of the stomach be reduced, and all the symptoms alleviated. After the effects of the Mercury had pervaded the system, there was but little dif-

ficulty in keeping the bowels open by mild purgatives. Blisters were used on the extremities and Epigastrium with some benefit.

The most distinguished attribute of this fever was, that it would not bear the Bark in any shape; the most mild tonics only were admissible after a distinct remission. The patients generally recovered in about four or five weeks. but when removed from ~~within~~ the influence of the affected atmosphere, they recovered much sooner. Rather more than two hundred fell victims to the Epidemic, in a population of about five thousand."

I have recieved accounts of the disease, as it prevailed in several other towns, all of which appear to be very similar to the above description, and therefore it will not be necessary to say much about them, The treatment in different places being so various

that it seems difficult to ascertain the success of any particular mode of cure.

I think it will appear evident, from the above description of the different diseases, that they depend on one common cause, this cause, varying only in degree, and modified by some peculiar circumstances. Thus, we see them attacking the same parts of the body, running a similar course, requiring a similarity of treatment, and varying in exact proportion to the intensity of the disease. One cause only is observable, and the diseases increase in exact proportion as that cause is developed.

The South West winds evidently contain much Miasmatick influence, extending it over the whole country, producing Biliary derangement, debilitating the digestive organs, and destroying the bal

ance of the system. The intense heat of the sun relaxing muscular fibre, and the cool and damp nights suppressing perspiration. Thus, the system is prepared to sink under any augmentation of the cause, arising from low and damp situation as in the neighbourhood of Marshes; where unfortunately many of the principal towns are situated.

When the thick Forest shall be removed the product of agriculture properly preserved, the Marshes drained; and the Inhabitants observing a more strict temperance. We may expect to find the cause of the fever lessened. And when the Science of Medicine becomes properly applied to practical purposes, we then may expect to find the diseases of the Western Country divested of half of their Terrors.